

Amendments to the Claims:

1. (Currently amended) A remote shut-off valve comprising a diaphragm valve and a pilot valve, the diaphragm valve having an inlet, an outlet, a valve member and a valve seat, the valve member having a closed position in which it engages the seat and blocks fluid flow from the inlet to the outlet and an open position in which the valve member does not engage the valve seat and fluid can flow from the inlet to the outlet, a first fluid conduit connecting the inlet of the diaphragm valve to the inlet of the pilot valve and a second fluid conduit connecting the outlet of the pilot valve to the outlet of the diaphragm valve, the first fluid conduit having a first part and a second part, the second fluid conduit having a first part and a second part, the first part of the first fluid conduit and the first part of the second fluid conduit being provided by respective flow channels in the body of the diaphragm valve, the second part of the first fluid conduit and the second part of the second fluid conduit being provided by respective flexible tubes, the diaphragm valve having a control chamber, and a flow channel connecting the control chamber to the diaphragm valve inlet, wherein the flow channel is located connecting the control chamber to the diaphragm valve inlet is a branch off the first part of the first fluid conduit within the body of the diaphragm valve.
2. (Original) A remote shut-off valve according to claim 1 wherein the body of the diaphragm valve includes a removable cap member which provides the control chamber, the flow channel being located within the cap member.
3. (Original) A remote shut-off according to claim 2 wherein a part of the fluid conduits are formed within the cap member, and in which the flow channel comprises a branch in the first fluid conduit within the cap member.
4. (Original) A remote shut-off valve according to claim 2 wherein the diaphragm valve includes a housing, and wherein the periphery of the valve member is clamped between the cap member and the housing.
5. (Cancelled).
- 5.8. (Currently amended) A remote shut-off valve according to claim 5.1 wherein the flexible tubes are secured to the body of the diaphragm valve by way of quick-release connectors.

6 7. (Original) A remote shut-off valve according to claim *6* wherein the quick-release connectors include respective O-ring seals which can engage a part of a flexible tube and provide a seal therearound.

7 8. (Original) A remote shut-off valve according to claim *7* wherein releasable securing means are provided to secure the flexible tubes within the respective O-ring seal.

8 9. (Currently amended) A remote shut-off valve according to claim *8* comprising a diaphragm valve and a pilot valve, the diaphragm valve having an inlet, an outlet, a valve member and a valve seat, the valve member having a closed position in which it engages the seat and blocks fluid flow from the inlet to the outlet and an open position in which the valve member does not engage the valve seat and fluid can flow from the inlet to the outlet, a first fluid conduit connecting the inlet of the diaphragm valve to the inlet of the pilot valve and a second fluid conduit connecting the outlet of the pilot valve to the outlet of the diaphragm valve, the diaphragm valve having a control chamber, and a flow channel connecting the control chamber to the diaphragm valve inlet, wherein the flow channel is located within the body of the diaphragm valve, wherein part of the first and second fluid conduits are provided by respective flexible tubes, and wherein the releasable securing means is provided for securing the flexible tubes to the body of the diaphragm valve, the releasable securing means comprising comprises a securing housing within which both of the flexible tubes are retained, the securing housing carrying locking means to lock the securing housing to the body of the diaphragm valve.

9 10. (Original) A remote shut-off valve according to claim *9* wherein the flexible tubes are at least partially resilient, and wherein part of each tube is retained in the securing housing within a respective curved channel.

10 11. (Original) A remote shut-off valve according to claim *10* wherein each curved channel is bordered by a wall, and a part of the wall has an opening through which the flexible tube may be passed.

11 12. (Currently amended) A remote shut-off valve according to claim *5* comprising a diaphragm valve and a pilot valve, the diaphragm valve having an inlet, an outlet, a valve member and a valve seat, the valve member having a closed position in which it engages the seat and blocks fluid flow

a 4

from the inlet to the outlet and an open position in which the valve member does not engage the valve seat and fluid can flow from the inlet to the outlet, a first fluid conduit connecting the inlet of the diaphragm valve to the inlet of the pilot valve and a second fluid conduit connecting the outlet of the pilot valve to the outlet of the diaphragm valve, the diaphragm valve having a control chamber, and a flow channel connecting the control chamber to the diaphragm valve inlet, wherein the flow channel is located within the body of the diaphragm valve, wherein part of the first and second fluid conduits are provided by respective flexible tubes, wherein the pilot valve is located within a valve housing, and wherein the valve housing includes a respective curved channel for each of the flexible tubes.

12 13. A remote shut-off valve according to claim 1 in which the pilot valve is non-directional.

Request for One-Month Extension of Time under 37 C.F.R. 1.136(a)

Applicants hereby request a one-month extension of time under 37 C.F.R. 1.136(a), thus extending the time for responding to the November 26, 2002 Office Action to March 26, 2003.

A check payable to the Commissioner for Patent in the amount of \$55.00 is enclosed herewith, for payment of the one-month extension fee under 37 C.F.R. 1.17(a)(1).

Amendment of the Specification

The Examiner's objections to the instant specification, as stated on page 2 of the November 26, 2002 Office Action, are overcome by corresponding amendments of the specification herein.

Submission of Formal Drawings

In response to the October 16, 2002 Notice of Draftsperson's Patent Drawing Review, which requires submission of new formal drawings, Applicant is concurrently submitting a set of new formal drawings for Figures 1-5, which overcome all objections in the Notice of Draftsperson's Patent Drawing Review.

Amendments of Allowable Claims 9-12

In the November 26, 2002 Office Action, the Examiner indicated that claims 9-12 would be allowable if rewritten in independent form.

Accordingly, claims 9 and 12 have been rewritten to include all the limitations of former claims 1 and 5, which are coextensive with the Examiner's Statement of Reasons for Allowance on page 5 of the November 26, 2002 Office Action. Claims 10 and 11 both directly depend from claim 9 and thus incorporate all the limitations of claim 9 through such dependency.

Therefore, claims 9-12 as amended herein are in form and condition for allowance.

Response to the §102 and §103 Rejections of Claims 1-8 and 13

In the November 26, 2002 Office Action, the Examiner rejected claims 1-8 and 13 on reference grounds.

Specifically, the Examiner rejected:

Claims 1-4 and 13 under 35 U.S.C. 102(b) as being anticipated by Sheets U.S. Patent No. 2,417,994 (hereinafter “Sheets”); and

Claims 5-8 under 35 U.S.C. 103(b) as being obvious over Sheets in view of Smith U.S. Patent No. 4,063,708 (hereinafter “Smith”).

In response, Applicant has hereby amended claims 1, 6, 9 and 12 and cancelled claim 5.

Applicant respectfully traverses the Examiner’s rejections of claims 1-4, 6-8, and 13 as amended, for the following reasons.

The amended claim 1, from which claims 2-4, 6-8 and 13 depend, expressly requires that that “the first fluid conduit [has] a first part and a second part, and the second fluid conduit [has] a first part and a second part,... the second part of the first fluid conduit and the second part of the second fluid conduit being provided by respective flexible tubes.”

With the above-recited requirement of claim 1, the remote nature of shut-off valve in Applicant’s claimed invention is further clarified. Specifically, the instant specification discloses on page 7, first full paragraph that the provision of flexible tubes between the diaphragm valve and the pilot valve is advantageous for remote applications, which allows the pilot valve to be located separately (and normally in a convenient location) from the diaphragm valve (which is normally substantially inaccessible).

In contrast, the Sheets reference cited by the Examiner only discloses a pilot valve that is located adjacent to a diaphragm valve, which are not suitable for remote applications and therefore do not constitute “a remote shut-off valve,” as required by claim 1 of the present application. Nothing in the Sheets reference teaches or suggests that the pilot valve can be physically separated from the diaphragm valve for remote applications.

Therefore, Sheets fails to provide any derivative basis for a remote shut-off valve, as expressly required by Applicant’s claimed invention.

On page 4 of the November 26, 2002 Office Action, the Examiner conceded that the Sheets reference failed to disclose any flexible tubes. In attempt to remedy such deficiency of Sheets, the Examiner cited the Smith reference, stating that it would be obvious to replace certain tubes in Fig.1 of the Sheets reference with flexible tubes disclosed by the Smith reference.

The Applicant respectfully disagrees.

The hypothetical combination of the Sheets reference and the Smith reference, as suggested by the Examiner, is not supported by any suggestion or disclosure in such references, and is derived solely out of impermissible hindsight of the disclosure of the present invention. Therefore, such hypothetical combination of the Sheets and Smith references is improper and cannot be used to establish a *prima facie* case of obviousness against Applicant’s claimed invention.

Further, claim 1 has been amended to require that “the flow channel connecting the control chamber to the diaphragm valve inlet is a branch off the first part of the first fluid conduit within the body of the diaphragm valve.”